

# Western Europe Satisfaction with Vendor Service

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Ken Carter  
Senior Consultant  
Customer Service Programme  
INPUT Europe



## Theme

- User Satisfaction 1988
- Trends 1987-1988
- Quality Issues
- Pricing Trends

INPUT

NOTES:

CSPA-KC-2



## INPUT User Sample, 1988

- 1,593 interviews
- 10 European countries
- Users of 14 vendors' systems

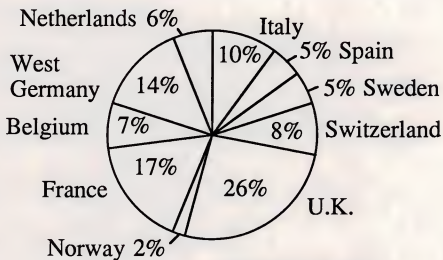
INPUT

NOTES:

CSPA-KC-3



## Sample Distribution by Country



Sample Size: 1,593

INPUT

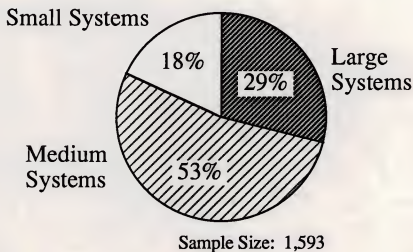
NOTES:

CSPA-KC-4





## Sample Distribution by Systems Size



INPUT

NOTES:

CSPA-KC-5



## Satisfaction Index

Importance '—' Satisfaction

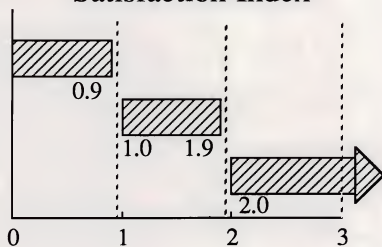
INPUT

NOTES:

CSPA-KC-6



## Satisfaction Index



INPUT

NOTES:

CSPA-KC-7



## INPUT 1988 User Survey Main Characteristics

- System size is not a factor
- Decline in satisfaction
- User expectation margin

INPUT

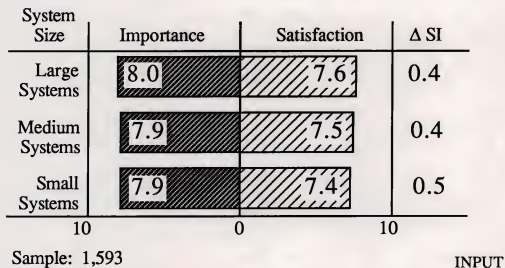
NOTES:

CSPA-KC-8





## Western Europe Overall Hardware Service Performance



NOTES:

CSPA-KC-9



## Hardware Service Satisfaction

0      Satisfaction Index  $\Delta$  SI      0.5

Most Satisfied

- Consultancy/planning
- Training
- Telephone support
- Service administration
- Remote diagnostics
- Out-of-hours

INPUT

NOTES:

CSPA-KC-10



## Hardware Service Satisfaction

0.5 Satisfaction Index  $\Delta$  SI 1.0

Least Satisfied

- Engineer skills
- Problem escalation
- Back-up support
- Call handling
- Documentation

INPUT

NOTES:

CSPA-KC-11



## Hardware Service Satisfaction

1.0 Satisfaction Index  $\Delta$  SI 1.5

Concern

- Spares availability

INPUT

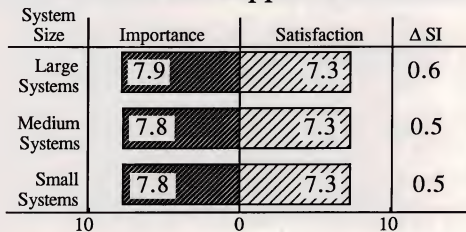
NOTES:

CSPA-KC-12





## Western Europe Overall Software Support Performance



Sample: 1,593

INPUT

NOTES:

CSPA-KC-13



## Software Support Satisfaction

0 Satisfaction Index  $\Delta$  SI 0.5

Most Satisfied

- Hotline
- Capacity tuning
- On-site support
- Consultancy/planning
- Remote diagnostics
- Problem database

INPUT

NOTES:

CSPA-KC-14



## Software Support Satisfaction

0.5 Satisfaction Index  $\Delta$  SI 1.0

Least Satisfied

- Telephone fix speed
- Telephone access
- Software updates
- Software installation
- Training

INPUT

NOTES:

CSPA-KC-15



## Software Support Satisfaction

1.0 Satisfaction Index  $\Delta$  SI 1.5

Concern

- Engineer skills
- Documentation

INPUT

NOTES:

CSPA-KC-16





## Major Challenges and Issues

- Hardware
  - Engineer skill
  - Spares availability
- Software
  - Engineer skill
  - Documentation

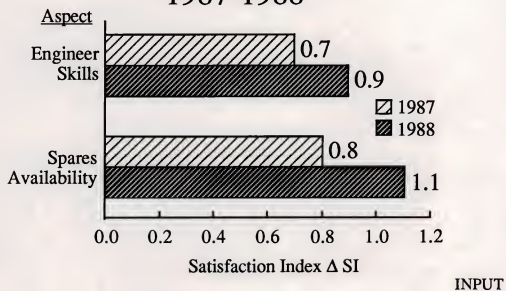
INPUT

NOTES:

CSPA-KC-17



## Hardware Service Trends 1987-1988

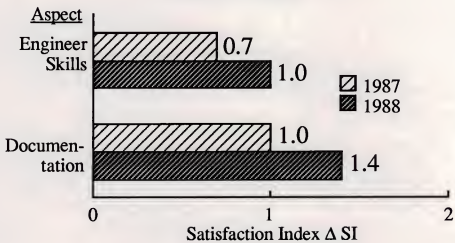


NOTES:

CSPA-KC-18



## Software Support Trends 1987-1988



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NOTES:

CSPA-KC-19



## Major Challenges and Issues

- Decline in user satisfaction
  - Software support
  - System failure rates
  - Systems availability
  - Response times

INPUT

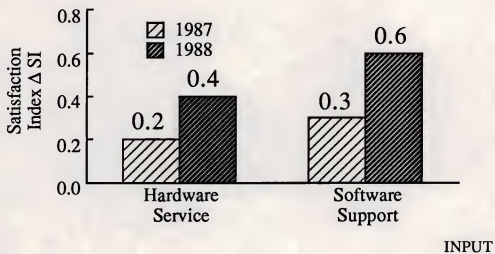
NOTES:

CSPA-KC-20





## Western Europe Overall Satisfaction Trends, 1987-1988

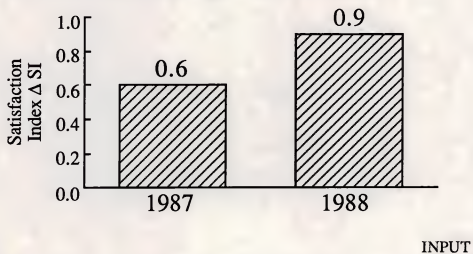


NOTES:

CSPA-KC-21



## Satisfaction with Systems Availability Trends, 1987-1988

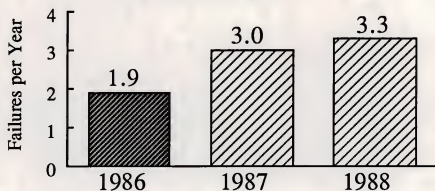


NOTES:

CSPA-KC-22



## System Failure Rate Trends 1986-1988



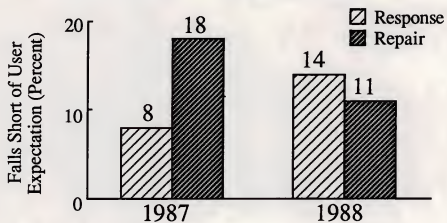
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NOTES:

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## Hardware Service Response/Repair Time Trends, 1987-1988



INPUT

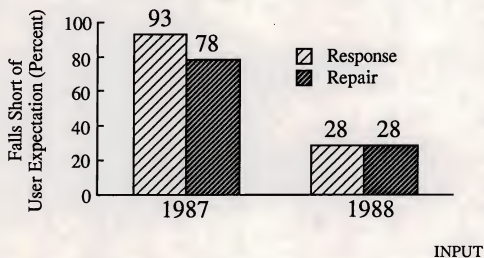
NOTES:

CSPA-KC-24





## Software Support Response/Fix Time Trends, 1987-1988



NOTES:

CSPA-KC-25



## Country Comparisons

- 10 countries
- Users of 14 vendors' systems

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NOTES:

CSPA-KC-26



## Country Comparisons, 1988 Major Challenges and Issues

### Hardware

- User concern in Spain
- Some decline in user satisfaction

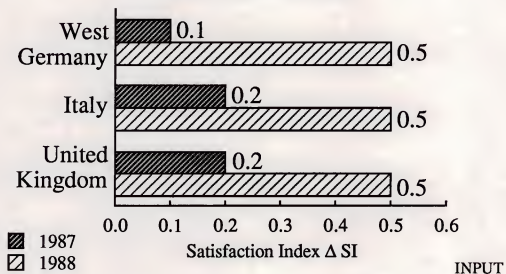
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NOTES:

CSPA-KC-27



## Hardware Service Major Trends, 1987-1988



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CSPA-KC-28





## Hardware—User Concern

- |                |  |
|----------------|--|
| West Germany   | <ul style="list-style-type: none"><li>• Spares availability</li><li>• Documentation</li></ul>      |
| Italy          | <ul style="list-style-type: none"><li>• None</li></ul>   |
| United Kingdom | <ul style="list-style-type: none"><li>• Spares availability</li><li>• Problem escalation</li></ul> |

INPUT

NOTES:

CSPA-KC-29



## Country Comparisons, 1988 Major Challenges and Issues

### Software

- User concern in: France  
Sweden  
Spain
- Some decline in user satisfaction

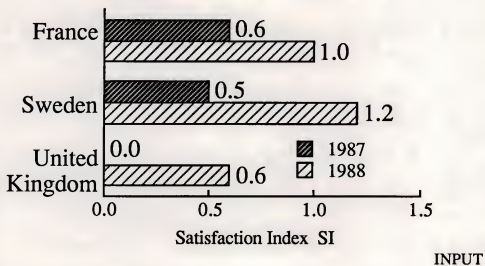
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NOTES:

CSPA-KC-30



## Software Support Major Trends, 1987-1988



NOTES:

CSPA-KC-31



## Software—User Concern

France and  
Sweden

- Engineer skill
- Documentation
- Software training
- Telephone support
- Software updates
- Capacity tuning

United Kingdom

- Documentation

INPUT

NOTES:

CSPA-KC-32





## Improving User Satisfaction INPUT's Recommendations

- Respond
- Communicate
- Deliver

Quality Is Key

INPUT

NOTES:

CSPA-KC-33



## Quality Is Key

- Users rate quality as more important than price
- 70% of users consider service has a good price/performance ratio
- 20% of users are "price sensitive"
- But, users are dissatisfied with service price?

INPUT

NOTES:

CSPA-KC-34



## Quality Is Key

- User perceived quality can be quantified
  - Satisfaction levels
  - System availability
  - System failure rates
  - User response/repair expectation
- Vendor quality image

INPUT

NOTES:

CSPA-KC-35



## Vendor-Quality Image

- "Reflex" response
- Performance
- Thresholds
- Profile difference

INPUT

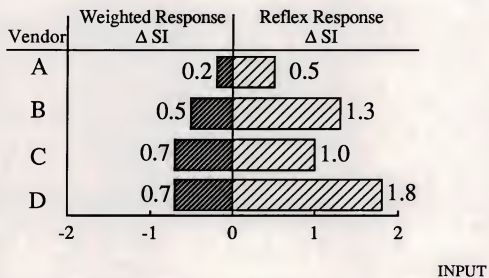
NOTES:

CSPA-KC-36





## "Reflex" Response



NOTES:

CSPA-KC-37



## Poor-Quality Image

Failure in more than two criteria:

- Concern with more than two aspects of service
- Concern with systems availability
- Three or more system failures per year

INPUT

NOTES:

CSPA-KC-38a



## Poor-Quality Image

Failure in more than two criteria:

- Response time falls short of user expectation
- Repair/fix time falls short of user expectation

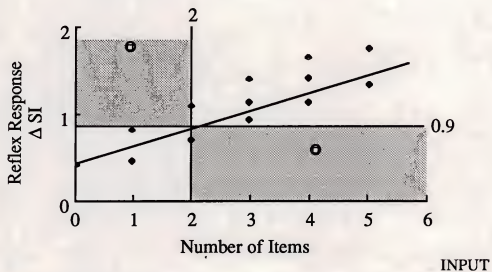
INPUT

NOTES:

CSPA-KC-38b



## Quality-Image Profile



NOTES:

CSPA-KC-39





## Hardware Service

- User concerns
  - Engineer skills
  - Spares availability
- Vendor issues
  - Restore time
  - Quality/price
  - Flexibility
  - Operational impact

INPUT

NOTES:

CSPA-KC-40



## Software Support

- User concerns
  - Engineer skills
  - Documentation
- Vendor issues
  - Software quality
  - Skill levels
  - User satisfaction

INPUT

NOTES:

CSPA-KC-41



## Quality/Price Conflict

### Users

- Quality more important than price
- 70% consider that service has good price/performance

INPUT

NOTES:

CSPA-KC-42a



## Quality/Price Conflict

### Vendors

- 40% consider that price restricts service quality
- 15% concerned that pricing pressure may impact quality

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NOTES:

CSPA-KC-42b





## Pricing Issues

- Stagnation, hardware service market
- Price increases
- Selective pricing/profitability

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NOTES:

CSPA-KC-43



## Price Stimulation

Historical vendor-pricing activities



Influence



Future users' price expectations

INPUT

NOTES:

CSPA-KC-44



## Confidence in Computer Vendors

- 65%+ of users show preference for one-vendor services
- 85% to 89% prefer the "one-vendor" to be main hardware supplier

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NOTES:

CSPA-KC-45



## Challenges

- Reversal of selective pricing trends
- Dominance of hardware service as a revenue stream
- Vendor-quality image

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NOTES:

CSPA-KC-46





## Opportunities

- Hardware service
- Large systems
- Quality service

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NOTES:

CSPA-KC-47



## Pricing Opportunities

Future Price Increase Expectation	Percent		
	Large Systems	Medium Systems	Small Systems
Hardware Service	4.4	3.5	3.1
Software Support	5.0	3.7	3.4

Notes (1) User expectation

(2) Corrected for selective pricing

Sample Size: 1,345

INPUT

NOTES:

CSPA-KC-48



## Quality Is Key

- Quality is more important than price
- Quality is a key competitive strategy

INPUT

NOTES:

CSPA-KC-49



Ken Carter  
Senior Consultant  
INPUT

Ken Carter provides consultancy services for the Customer Service Program, Europe, and specializes in the analysis of customer services data and forecasting of trends within the industry. Mr. Carter has over 20 years experience in the computer industry, including ten years of management responsibility for vendor/customer interface.





# QUALITY CONTROL PROOFREADING SIGNOFF

DESCRIPTION Presentation for CSP Conf.

PROJECT CODE CSPE - KC

AUTHOR Ken Carter

DATE TO PROOFREADER	TO BE PROOFED BY	INITIAL	DATE
<u>3/29/89</u>	<u>Ken</u>	<u>mc</u>	<u>3/29</u>
<u>3/30</u>	<u>to author</u>		
<u>3/31</u>	<u>Eng</u>	<u>FE</u>	<u>3/31</u>
FINAL Q.C.			

☐ READY FOR PRINTER

# INPUT

# PRODUCTION WORK ORDER

(Please fill out both sides)

DATE IN: 3/27/89 DATE DUE: 4/7 PROJECT CODE: CSPE - CLK  
AUTHORIZED BY: \_\_\_\_\_ ☐ NEW ☐ REPEAT ☐ REPEAT W/CHANGE CSPA

## WORK SPECIFICATIONS

DATE OF PRESENTATION: 4/15/ 4/20  
Additional Information \_\_\_\_\_

- ☒ 35mm Slides \_\_\_\_\_  
☐ Foils \_\_\_\_\_  
☐ Exhibits \_\_\_\_\_  
☐ Questionnaire \_\_\_\_\_  
☐ Letter \_\_\_\_\_  
☐ Business Card \_\_\_\_\_  
☐ Note Paper \_\_\_\_\_  
☐ Newsletter \_\_\_\_\_  
☐ News Release \_\_\_\_\_  
☐ Form \_\_\_\_\_  
☐ Brochure \_\_\_\_\_  
☐ Cover Design \_\_\_\_\_  
☐ Other \_\_\_\_\_

Number of pages submitted \_\_\_\_\_ Text  
\_\_\_\_\_ Graphics

## SPECIAL INSTRUCTIONS

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## PRINTING SPECIFICATIONS

- Quantity/Slides/Foils 50  
Quantity/Hard Copy \_\_\_\_\_  
Paper Size \_\_\_\_\_ X \_\_\_\_\_  
Finished Size \_\_\_\_\_ X \_\_\_\_\_  
Number of Pages \_\_\_\_\_  
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☐ Photocopy \_\_\_\_\_  
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☐ Double side \_\_\_\_\_  
☐ Three hole punch \_\_\_\_\_  
☐ Velobind punch \_\_\_\_\_  
☐ Trim to \_\_\_\_\_ X \_\_\_\_\_  
☐ Binding \_\_\_\_\_  
☐ Cover \_\_\_\_\_  
☐ Paper Color \_\_\_\_\_  
☐ Ink Color \_\_\_\_\_  
☐ Copyright Paper \_\_\_\_\_  
☐ Fold ☐ 1/2 fold ☐ 1/3 fold  
☐ Pad \_\_\_\_\_  
☐ Saddle Stitch \_\_\_\_\_  
☐ Box \_\_\_\_\_  
☐ Shrink Wrap \_\_\_\_\_  
☐ Staple ☐ Corner ☐ 2 on side \_\_\_\_\_

## MAILING SPECIFICATIONS

Envelope: ☐ No. 10 ☐ 9 x 12 ☐ 10 x 13 ☐ Reply Envelope Quantity \_\_\_\_\_  
☐ First Class ☐ Bulk ☐ Address Labels (Zip Code Order)

### Enclosures:

- ☐ Letter \_\_\_\_\_  
☐ Questionnaire \_\_\_\_\_  
☐ Newsletter \_\_\_\_\_  
☐ News Release \_\_\_\_\_  
☐ Form \_\_\_\_\_  
☐ Brochure \_\_\_\_\_  
☐ Business Reply Envelope \_\_\_\_\_  
☐ Other \_\_\_\_\_

### Distribution:

- ☐ Initial Mailing \_\_\_\_\_  
☐ Shelf Stock \_\_\_\_\_  
☐ NJ \_\_\_\_\_  
☐ DC \_\_\_\_\_  
☐ London \_\_\_\_\_  
☐ Paris \_\_\_\_\_  
☐ Japan \_\_\_\_\_

TOTAL \_\_\_\_\_

MAIL \_\_\_\_\_ COPIES DIRECTLY TO:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

# INPUT, LTD.

41 Dover Street, London W1X 3RB 01-493-9335  
Telex 27113 Fax 01-629-0179

KEN CARTER  
Consultant

SHEILA.

MY PRESENTATION  
FOR CSP CONFERENCE  
APRIL 19/20.

HOPE YOU DON'T HAVE  
TO SPILT ANY SLIDES,  
SHOULD BE OK.

Thanks

ke

P.S. TRM PRESENTATION WILL  
BE COMPLETE EARLY IN  
WEEK OF. 27 MARCH.



WESTERN EUROPE

SATISFACTION WITH VENDOR SERVICE

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KEN CARTER

SENIOR CONSULTANT

CUSTOMER SERVICE PROGRAMME

INPUT EUROPE

CSPA-KC

140

September 1900

Dear Mr. [Name],

I have received your letter of the 14th inst. and am glad to hear that you are well. I am also well and hope this letter finds you the same. I have been thinking of you very much lately and wondering how you are getting on. I hope you are still as active as ever.

I have been very busy lately with my work, but I have managed to find some time to write to you. I hope you are still as well as ever and that everything is going on as usual.

I have been thinking of you very much lately and wondering how you are getting on. I hope you are still as active as ever.

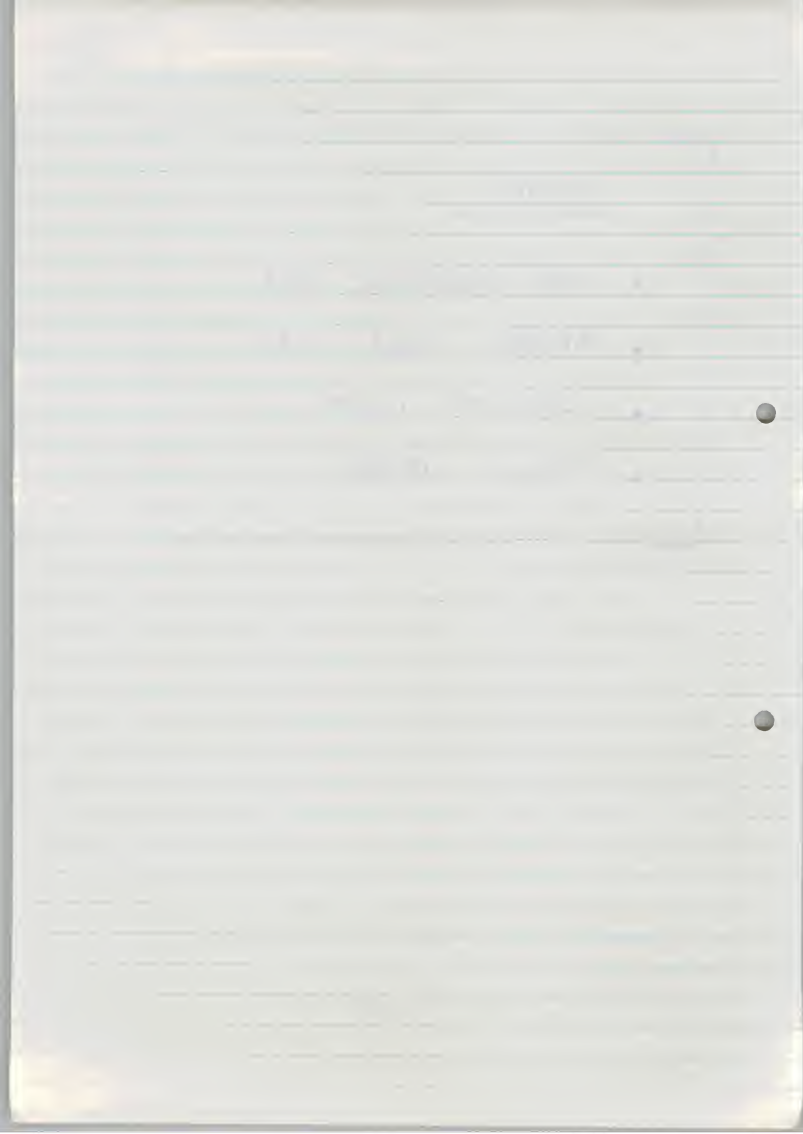
I have been very busy lately with my work, but I have managed to find some time to write to you. I hope you are still as well as ever and that everything is going on as usual.

I have been thinking of you very much lately and wondering how you are getting on. I hope you are still as active as ever.

I have been very busy lately with my work, but I have managed to find some time to write to you. I hope you are still as well as ever and that everything is going on as usual.

## THEME

- USER SATISFACTION 1988
- TRENDS 1987 - 1988
- QUALITY ISSUES
- PRICING TRENDS





## INPUT USER SAMPLE 1988

- 1593 INTERVIEWS
- 10 EUROPEAN COUNTRIES
- USERS OF 14 VENDORS SYSTEMS

THE UNIVERSITY OF CHICAGO

DEPARTMENT OF THE HISTORY OF ARTS

AND ARCHITECTURE

OFFICE OF THE DEAN

550 EAST 58TH STREET, CHICAGO, ILL. 60637

TEL. (312) 937-1234

TELETYPE (312) 937-1234

FAX (312) 937-1234

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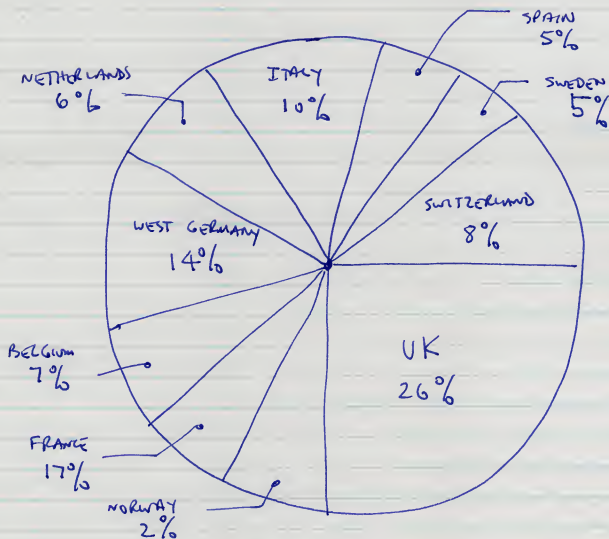
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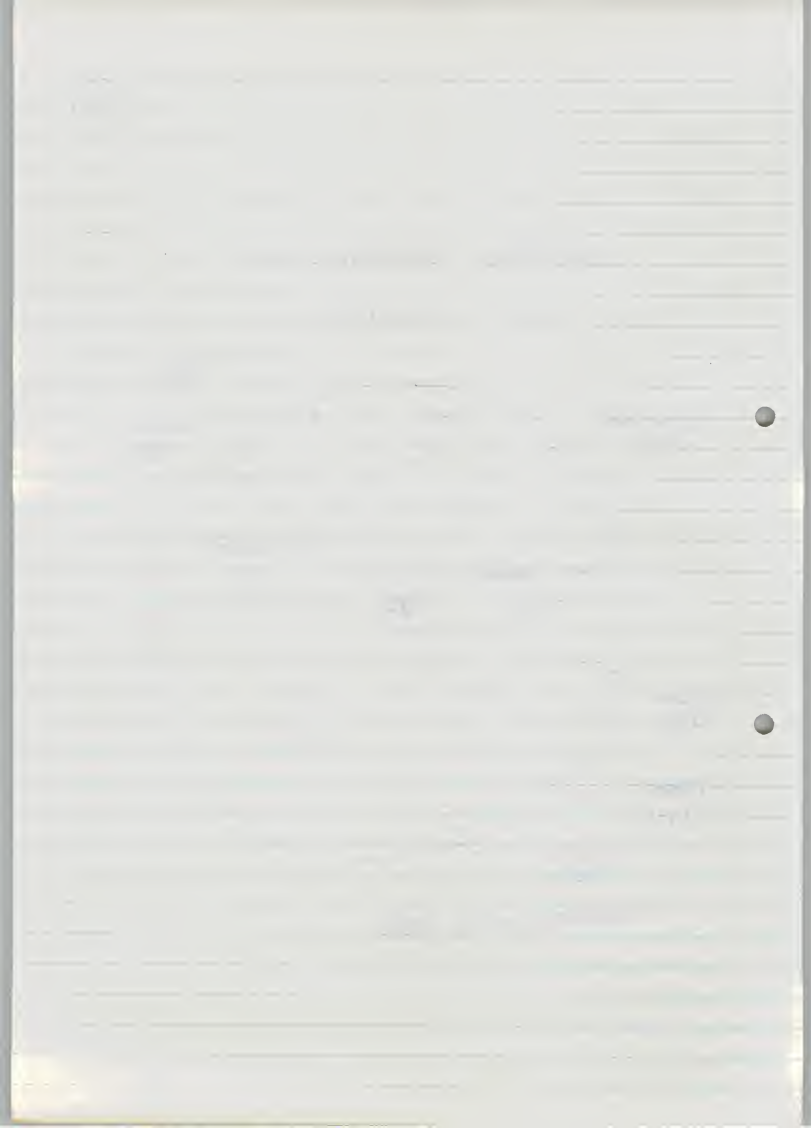
CHICAGO, ILL. 60637

CHICAGO, ILL. 60637

## SAMPLE DISTRIBUTION BY COUNTRY



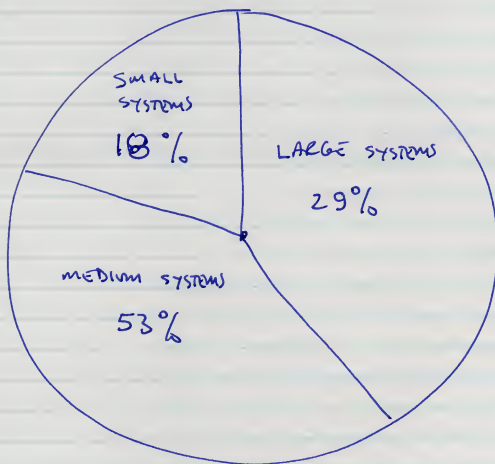
SAMPLE SIZE : 1593



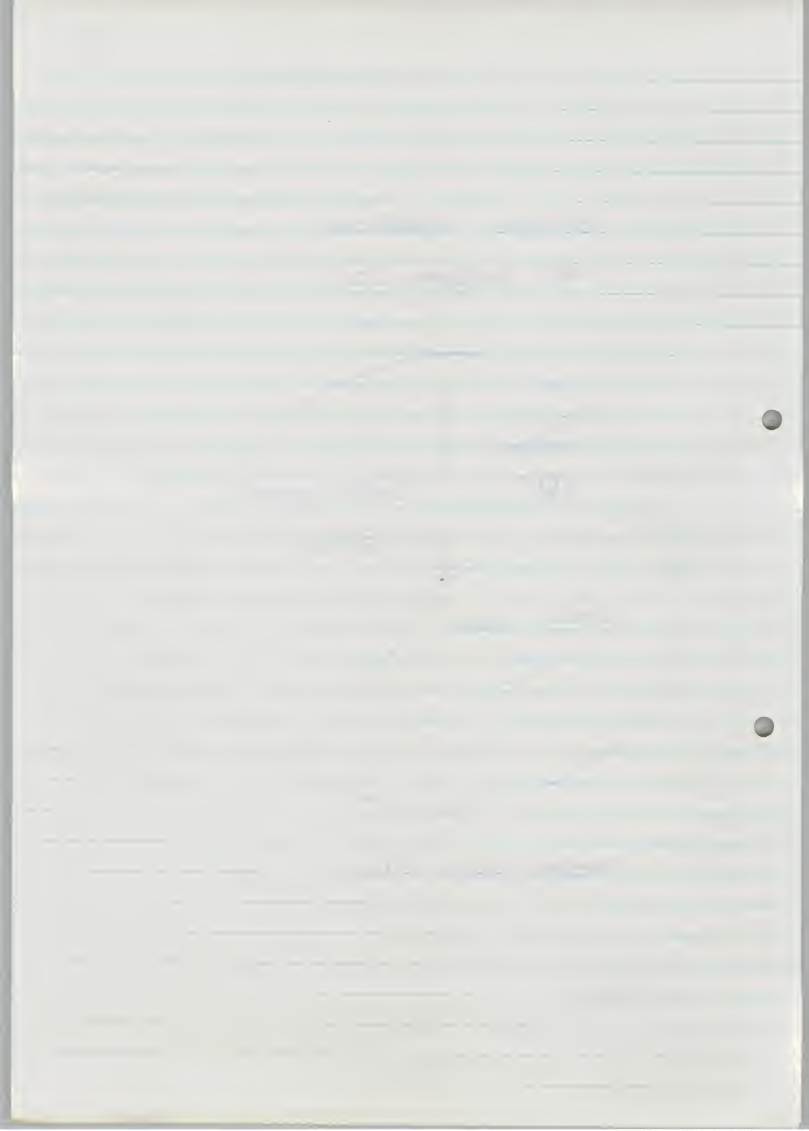
5

## SAMPLE DISTRIBUTION

BY SYSTEM SIZE



SAMPLE SIZE :- 1593



# Satisfaction Index

Importance '—' Satisfaction

INPUT

NOTES:

KH-4

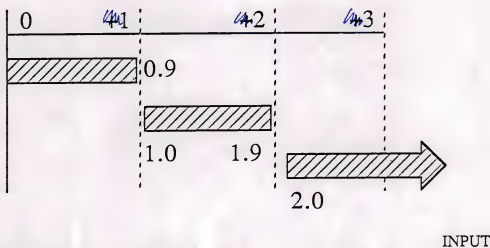
The first part of the paper  
 discusses the general theory  
 of the subject and the  
 various methods of  
 investigation.

The second part of the paper  
 discusses the various  
 methods of investigation  
 and the results of the  
 experiments.

The third part of the paper  
 discusses the various  
 methods of investigation  
 and the results of the  
 experiments.

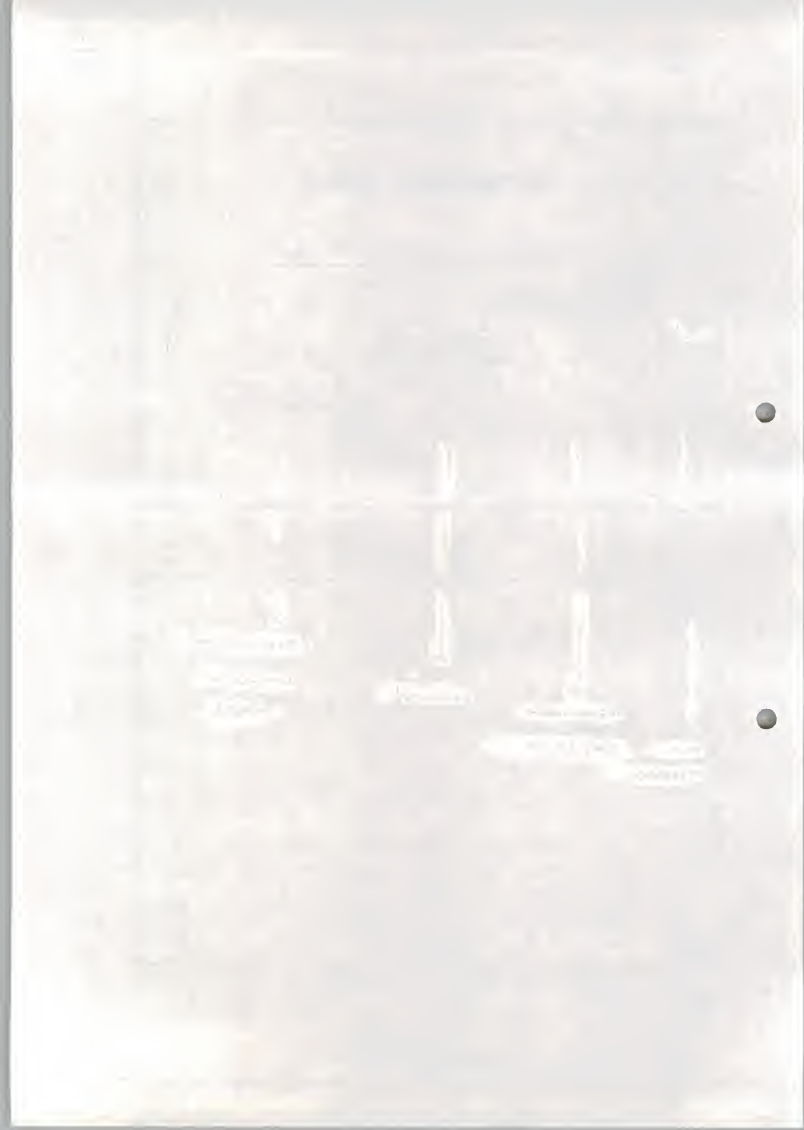


# Satisfaction Index



NOTES:

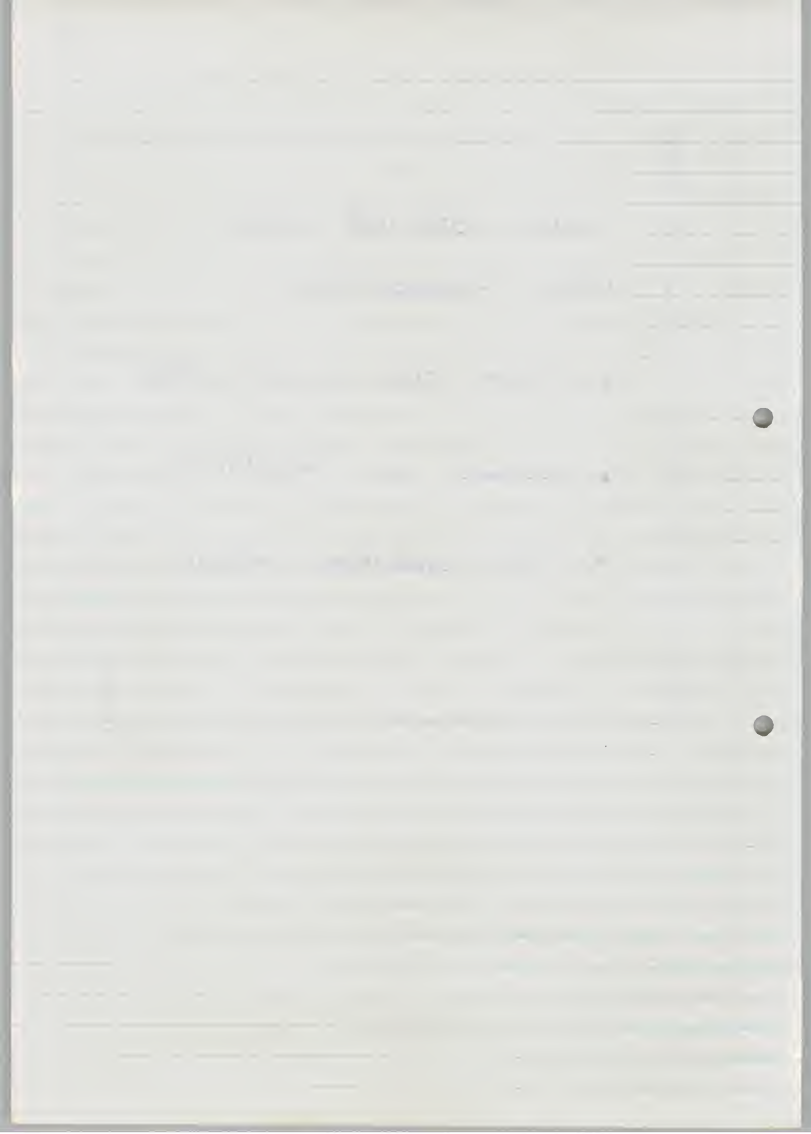
KH-5



INPUT 1988 USER SURVEY


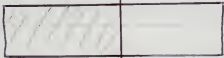
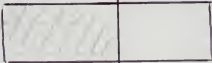
MAIN CHARACTERISTICS

- SYSTEM SIZE IS NOT A FACTOR
- DECLINE IN SATISFACTION
- USER EXPECTATION MARGIN



## WESTERN EUROPE

## OVERALL HARDWARE SERVICE PERFORMANCE

SYSTEM SIZE	IMPORTANCE					SATISFACTION					$\Delta SI$		
	10	8	6	4	2	0	2	4	6	8		10	
LARGE SYSTEMS	8.0						7.6						0.4
MEDIUM SYSTEMS	7.9						7.5						0.4
SMALL SYSTEMS	7.9						7.4						0.5

SAMPLE # 1593

1000

## Hardware Service Satisfaction

0 Satisfaction Index  $\Delta$  SI 0.5

### Most Satisfied

- Consultancy/Planning
- Training
- Telephone Support
- Service Administration
- Remote Diagnostics
- Out-of-Hours

INPUT

NOTES:

FPRE-KH-9

THE UNIVERSITY OF CHICAGO  
LIBRARY  
540 EAST 58TH STREET  
CHICAGO, ILL. 60637



## Hardware Service Satisfaction

0.5 Satisfaction Index  $\Delta$  SI 1.0

### Least Satisfied

- Engineer Skills
- Problem Escalation
- Back-Up Support
- Call Handling
- Documentation

INPUT

NOTES:

FPRE-KH-10

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## Hardware Service Satisfaction

1.0 Satisfaction Index  $\Delta$  SI 1.5

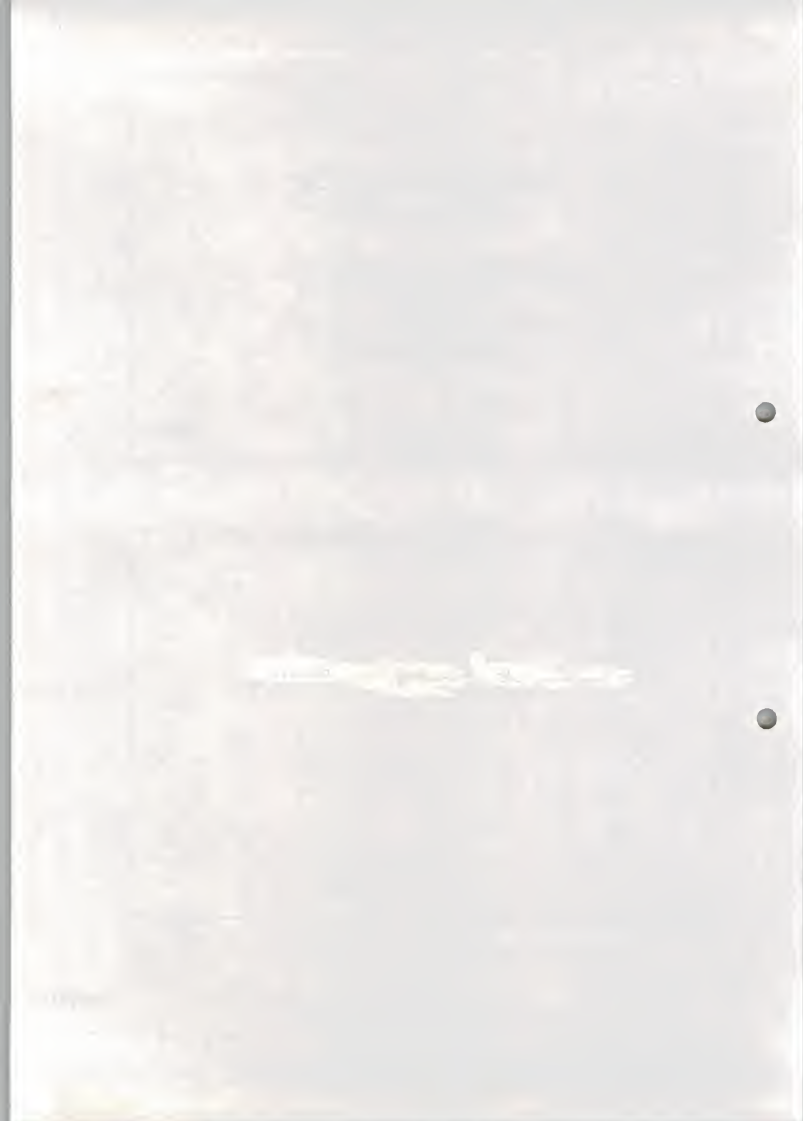
Concern

- Spares Availability

INPUT


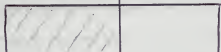

NOTES:

FPRE-KH-11



## WESTERN EUROPE

## OVERALL SOFTWARE SUPPORT PERFORMANCE

SYSTEM SIZE	IMPORTANCE						SATISFACTION						$\Delta SI$
	10	8	6	4	2	0	2	4	6	8	10		
LARGE SYSTEMS	7.9 						7.3						0.6
MEDIUM SYSTEMS	7.8 						7.3						0.5
SMALL SYSTEMS	7.8 						7.3						0.5

SAMPLE : 1593

The first part of the paper discusses the importance of the study and the objectives of the research. It then proceeds to a literature review, followed by a description of the methodology used in the study. The results of the study are presented in the next section, followed by a discussion of the findings and their implications. The paper concludes with a summary of the main points and a list of references.



## Software Support Satisfaction

0 Satisfaction Index  $\Delta$  SI 0.5

Most Satisfied

- Hotline
- Capacity Tuning
- On-Site Support
- Consultancy/Planning
- Remote Diagnostics
- Problem Database

INPUT

NOTES:

FPRE-KH-6





## Software Support Satisfaction

0.5 Satisfaction Index  $\Delta$  SI 1.0

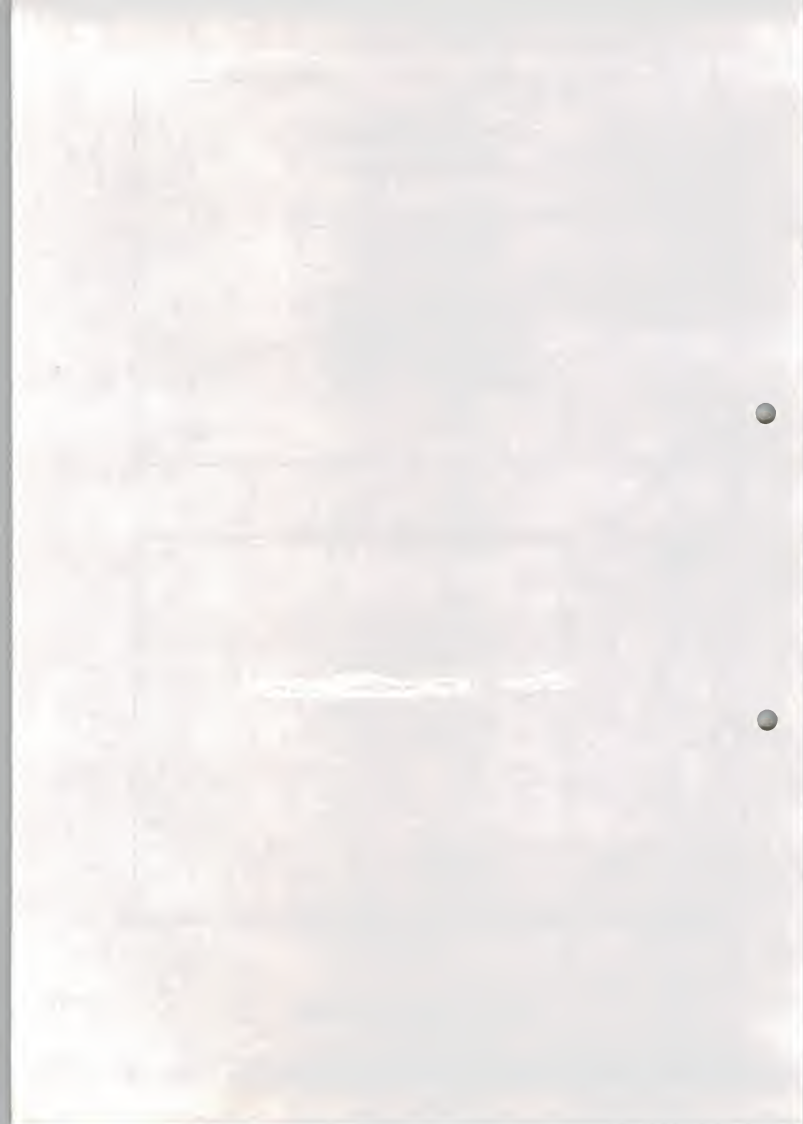
### Least Satisfied

- Telephone Fix Speed
- Telephone Access
- Software Updates
- Software Installation
- Training

INPUT

NOTES:

FPRE-KH-7



# Software Support Satisfaction

1.0 Satisfaction Index  $\Delta$  SI 1.5

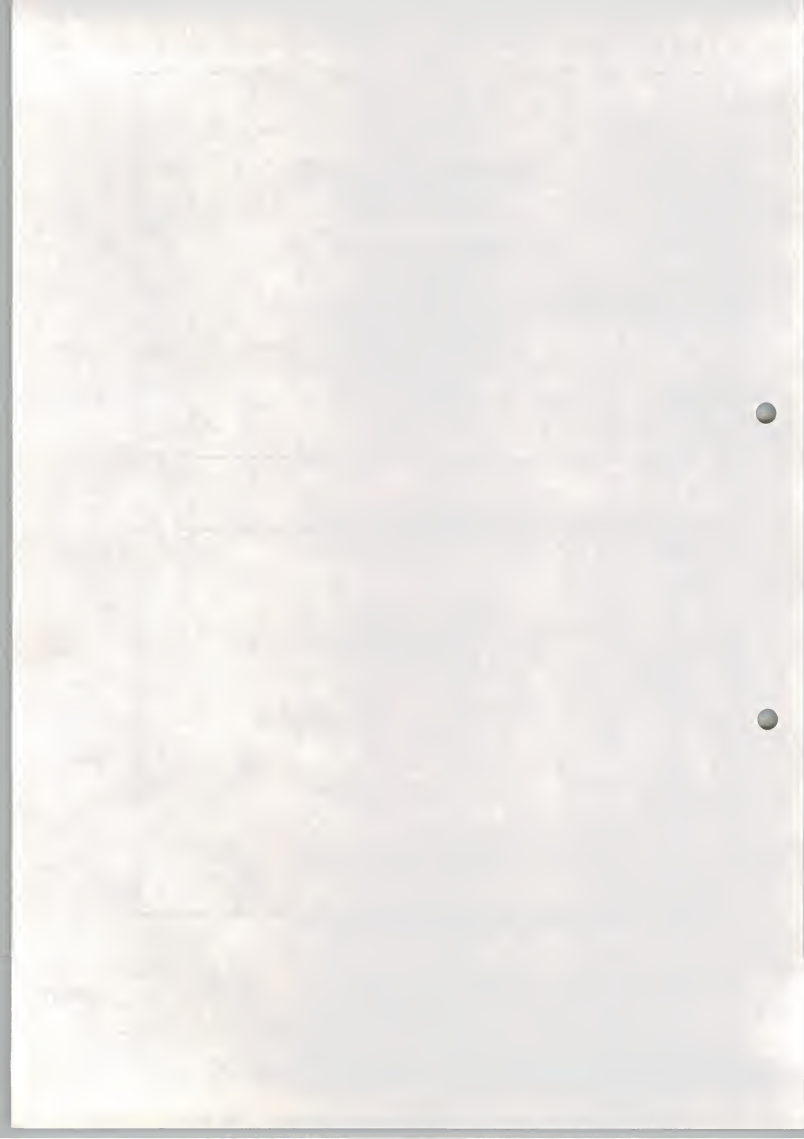
Concern

- Engineer Skills
- Documentation

INPUT

NOTES:

FPRE-KH-8



## MAJOR CHALLENGES AND ISSUES

### 1 HARDWARE

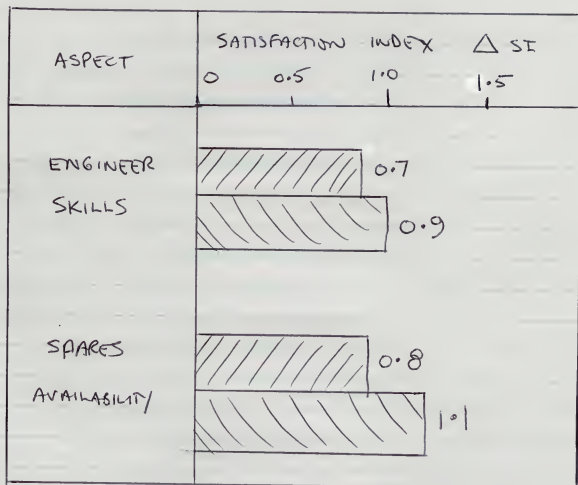
- ENGINEER SKILLS
- SPARES AVAILABILITY

### 2 SOFTWARE

- ENGINEER SKILLS
- DOCUMENTATION



## HARDWARE SERVICE TRENDS 1987-1988



1987

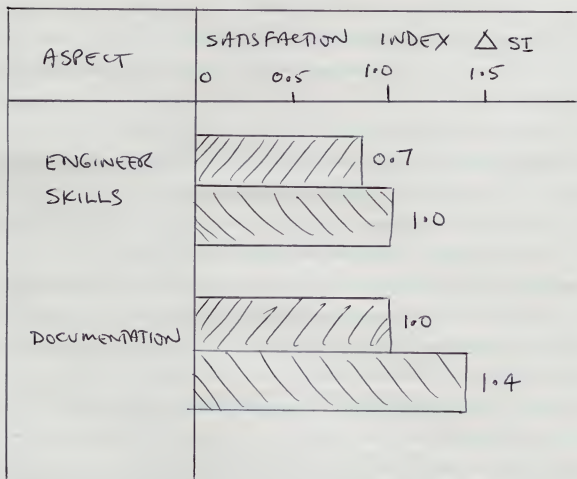


1988





## SOFTWARE SUPPORT TRENDS 1987-1988



1987



1988

The first part of the paper discusses the importance of the study of the history of the United States. It is argued that a knowledge of the past is essential for a full understanding of the present. The author then proceeds to a detailed examination of the early years of the Republic, from the time of the signing of the Declaration of Independence to the end of the War of 1812. This section covers the political, economic, and social developments of the period, and the role of the various states in the formation of the new nation.

The second part of the paper deals with the period from 1812 to 1860. This was a time of great change and growth for the United States. The author discusses the expansion of the territory, the development of the economy, and the increasing influence of the federal government. He also examines the social and cultural changes that were taking place, and the role of the various groups in society.

The third part of the paper covers the period from 1860 to 1890. This was a time of rapid industrialization and urbanization. The author discusses the growth of the manufacturing sector, the development of the railroads, and the increasing importance of the federal government. He also examines the social and cultural changes that were taking place, and the role of the various groups in society.

The fourth part of the paper deals with the period from 1890 to 1914. This was a time of great change and growth for the United States. The author discusses the expansion of the territory, the development of the economy, and the increasing influence of the federal government. He also examines the social and cultural changes that were taking place, and the role of the various groups in society.

The fifth part of the paper covers the period from 1914 to 1945. This was a time of great change and growth for the United States. The author discusses the expansion of the territory, the development of the economy, and the increasing influence of the federal government. He also examines the social and cultural changes that were taking place, and the role of the various groups in society.

The sixth part of the paper deals with the period from 1945 to 1960. This was a time of great change and growth for the United States. The author discusses the expansion of the territory, the development of the economy, and the increasing influence of the federal government. He also examines the social and cultural changes that were taking place, and the role of the various groups in society.

The seventh part of the paper covers the period from 1960 to 1980. This was a time of great change and growth for the United States. The author discusses the expansion of the territory, the development of the economy, and the increasing influence of the federal government. He also examines the social and cultural changes that were taking place, and the role of the various groups in society.

The eighth part of the paper deals with the period from 1980 to 1990. This was a time of great change and growth for the United States. The author discusses the expansion of the territory, the development of the economy, and the increasing influence of the federal government. He also examines the social and cultural changes that were taking place, and the role of the various groups in society.

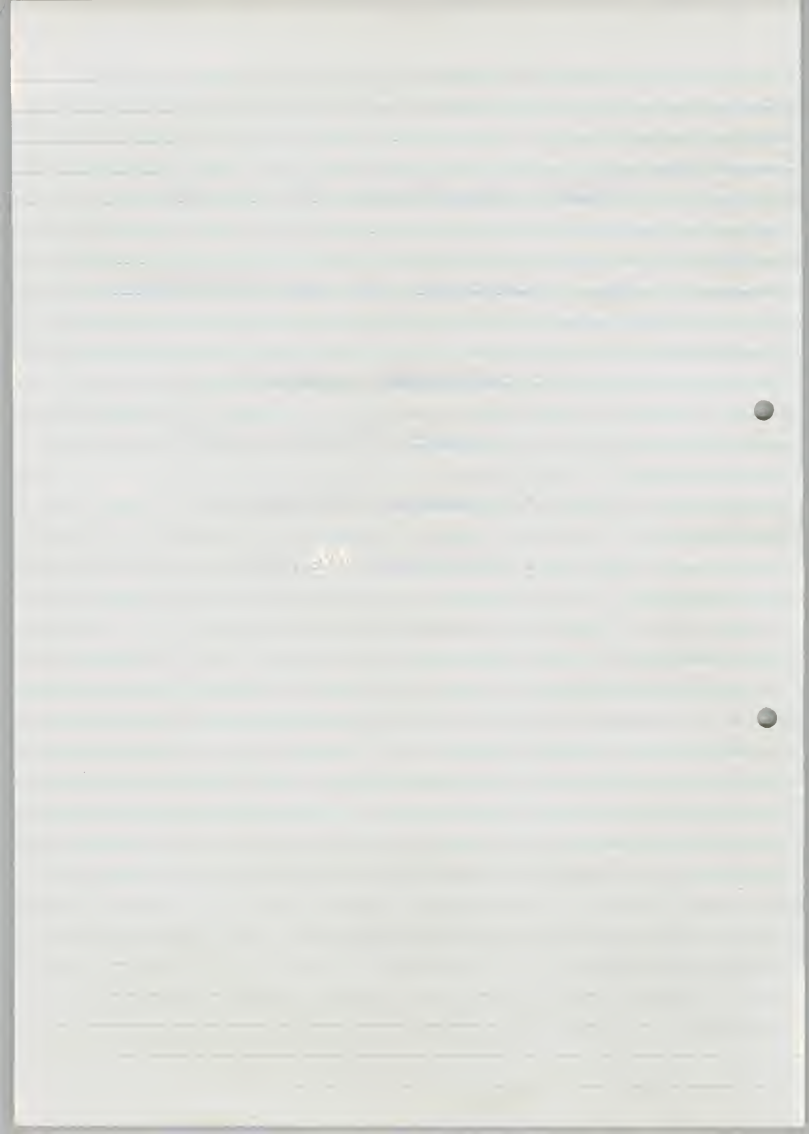
The ninth part of the paper covers the period from 1990 to 2000. This was a time of great change and growth for the United States. The author discusses the expansion of the territory, the development of the economy, and the increasing influence of the federal government. He also examines the social and cultural changes that were taking place, and the role of the various groups in society.

The tenth part of the paper deals with the period from 2000 to the present. This was a time of great change and growth for the United States. The author discusses the expansion of the territory, the development of the economy, and the increasing influence of the federal government. He also examines the social and cultural changes that were taking place, and the role of the various groups in society.

## MAJOR CHALLENGES AND ISSUES

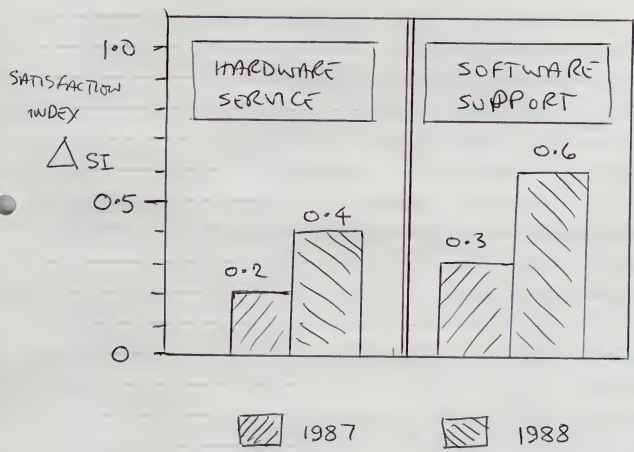
## 3. DECLINE IN USER SATISFACTION

- SOFTWARE SUPPORT
- SYSTEM FAILURE RATES
- SYSTEMS AVAILABILITY
- RESPONSE TIMES



# WESTERN EUROPE

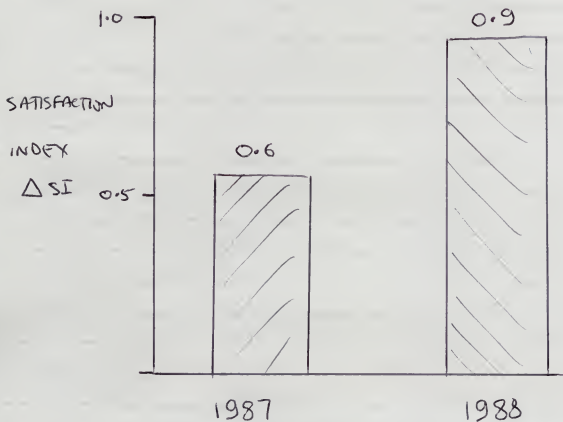
OVERALL SATISFACTION TRENDS 1987-1988



3/11/43

## SATISFACTION WITH SYSTEMS AVAILABILITY

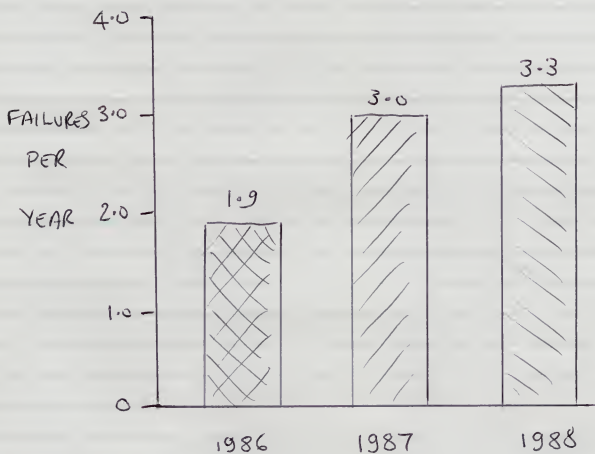
TRENDS 1987 - 1988







## SYSTEM FAILURE RATE TRENDS 1987-1988

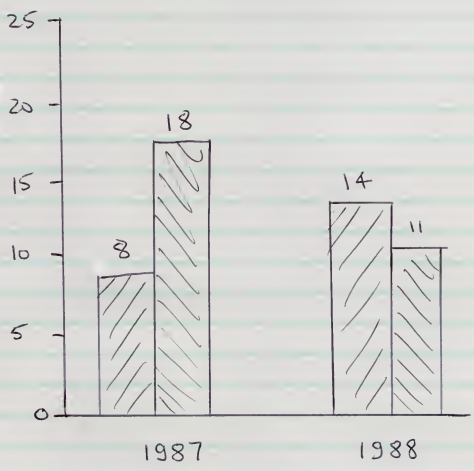





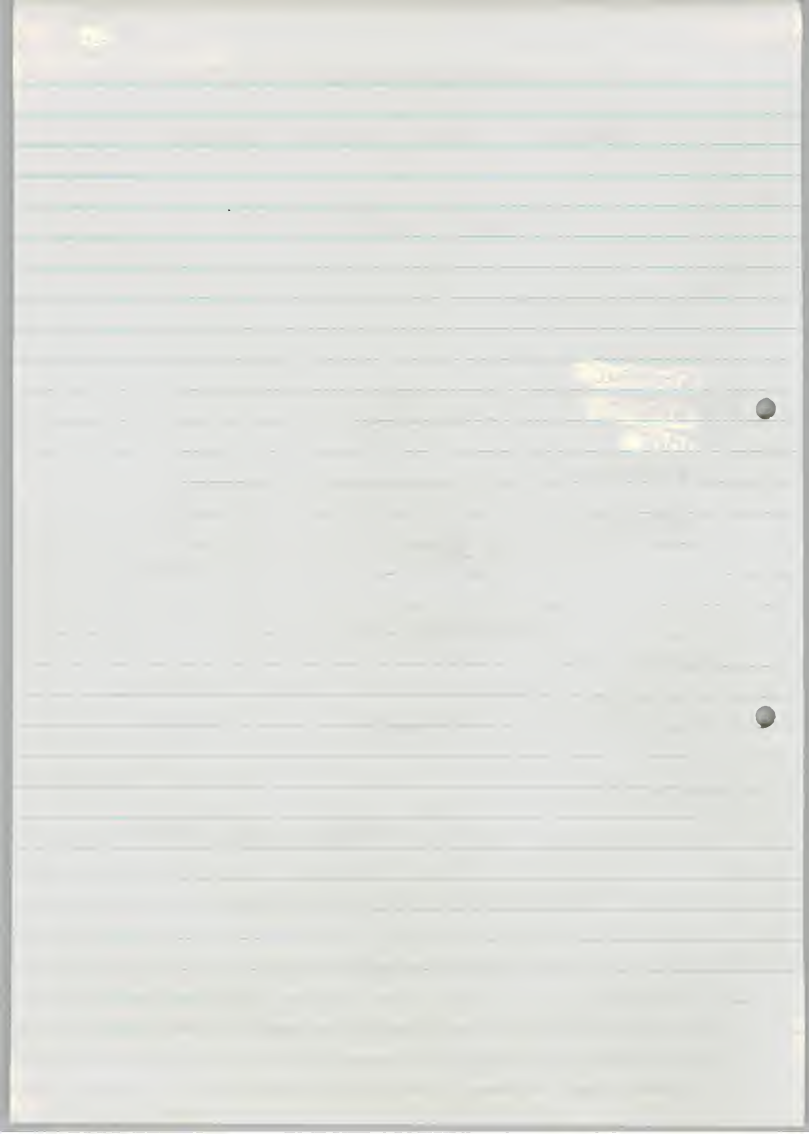
# HARDWARE SERVICE RESPONSE/REPAIR TIMES

TRENDS 1987 - 1988

FALLS SHORT  
OF USER  
EXPECTATION  
(PERCENT)

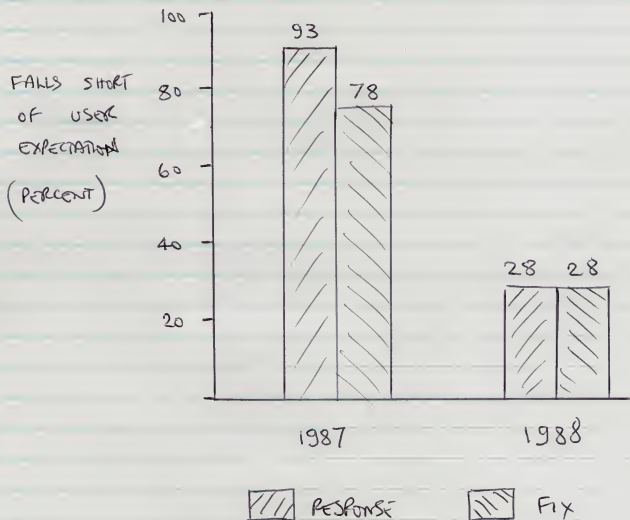


 RESPONSE       REPAIR



## SOFTWARE SUPPORT RESPONSE/FIX TIMES

TRENDS 1987 - 1988



# THEORY OF THE EARTH AND ITS HISTORY

THEORY OF THE EARTH AND ITS HISTORY

THEORY OF THE EARTH AND ITS HISTORY

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THEORY OF THE EARTH AND ITS HISTORY

THEORY OF THE EARTH AND ITS HISTORY

## COUNTRY COMPARISONS

- 10 COUNTRIES
- USERS OF 14 VENDORS SYSTEMS



Page 100



COUNTRY COMPARISONS 1988

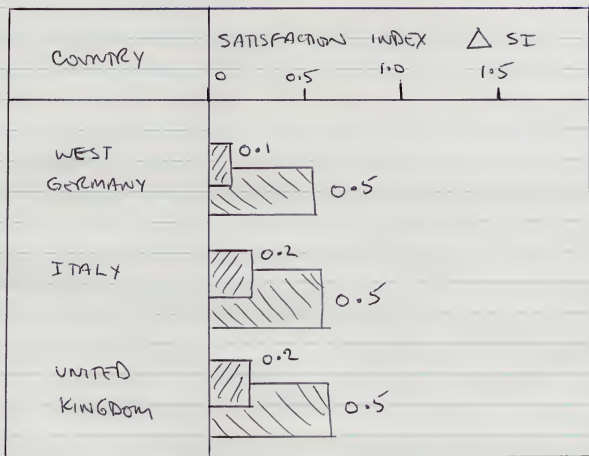
MAJOR CHALLENGES AND ISSUES

HARDWARE

- USER CONCERN IN SPAIN
- SOME DECLINE IN USER SATISFACTION

Can't see

## HARDWARE SERVICE MAJOR TRENDS 1987-1988



1987



1988



## HARDWARE — USER CONCERN

WEST GERMANY

- SPARES AVAILABILITY
- DOCUMENTATION

ITALY

- NONE

UNITED KINGDOM

- SPARES AVAILABILITY
- PROBLEM ESCALATION



## COUNTRY COMPARISONS 1988

### MAJOR CHALLENGES AND ISSUES

#### SOFTWARE

- USER CONCERN IN - FRANCE  
SWEDEN  
SPAIN
- SOME DECLINE IN USER SATISFACTION.

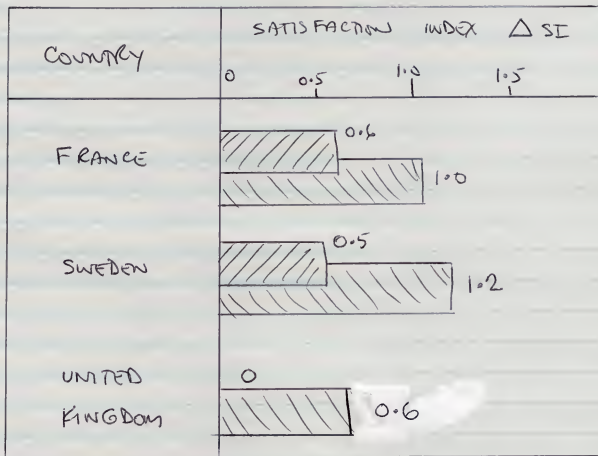
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## SOFTWARE SUPPORT MAJOR TRENDS 1987-1988



1987



1988



## SOFTWARE - USER CONCERN

FRANCE

AND

SWEDEN

- ENGINEER SKILLS
- TELEPHONE SUPPORT
- DOCUMENTATION
- SOFTWARE UPDATE
- SOFTWARE TRAINING
- CAPACITY TUNING

UNITED KINGDOM

- DOCUMENTATION

1. The first part of the paper is devoted to a general discussion of the problem of the existence of solutions of the system of equations

$$\frac{dx}{dt} = A(x)u, \quad \frac{dy}{dt} = B(y)v, \quad (1)$$

where  $A(x)$  and  $B(y)$  are matrices depending on  $x$  and  $y$  respectively, and  $u$  and  $v$  are control functions.

It is assumed that the matrices  $A(x)$  and  $B(y)$  are continuous and bounded.

The second part of the paper is devoted to the study of the problem of the existence of solutions of the system of equations

$$\frac{dx}{dt} = A(x)u, \quad \frac{dy}{dt} = B(y)v, \quad (2)$$

where  $A(x)$  and  $B(y)$  are matrices depending on  $x$  and  $y$  respectively, and  $u$  and  $v$  are control functions.

It is assumed that the matrices  $A(x)$  and  $B(y)$  are continuous and bounded.

The third part of the paper is devoted to the study of the problem of the existence of solutions of the system of equations

$$\frac{dx}{dt} = A(x)u, \quad \frac{dy}{dt} = B(y)v, \quad (3)$$

where  $A(x)$  and  $B(y)$  are matrices depending on  $x$  and  $y$  respectively, and  $u$  and  $v$  are control functions.

It is assumed that the matrices  $A(x)$  and  $B(y)$  are continuous and bounded.

The fourth part of the paper is devoted to the study of the problem of the existence of solutions of the system of equations

$$\frac{dx}{dt} = A(x)u, \quad \frac{dy}{dt} = B(y)v, \quad (4)$$

where  $A(x)$  and  $B(y)$  are matrices depending on  $x$  and  $y$  respectively, and  $u$  and  $v$  are control functions.

It is assumed that the matrices  $A(x)$  and  $B(y)$  are continuous and bounded.

The fifth part of the paper is devoted to the study of the problem of the existence of solutions of the system of equations

IMPROVING USER SATISFACTION

INPUT'S RECOMMENDATIONS

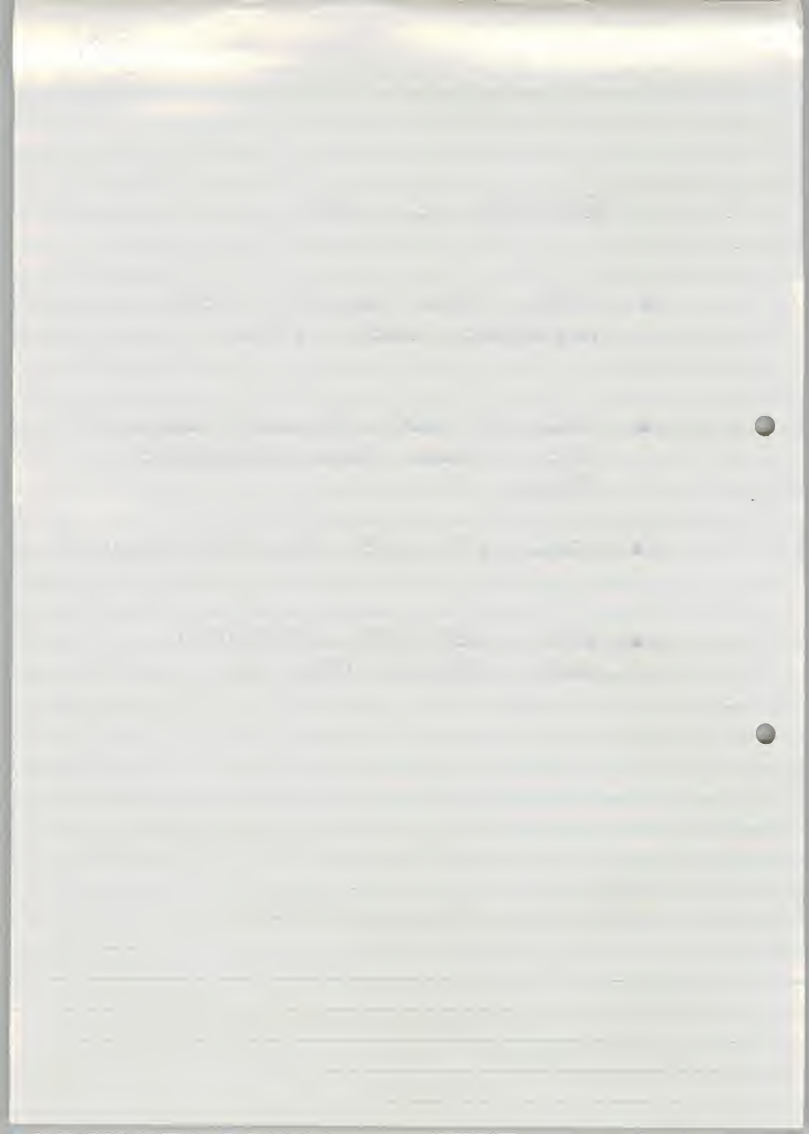
- RESPOND
- COMMUNICATE
- DELIVER

QUALITY IS KEY



## QUALITY IS KEY

- USERS RATE QUALITY MORE IMPORTANT THAN PRICE
- 70% OF USERS CONSIDER SERVICE HAS A GOOD PRICE / PERFORMANCE RATIO.
- 20% OF USERS ARE "PRICE SENSITIVE"
- BUT, USERS ARE DISSATISFIED WITH SERVICE PRICE ?





## QUALITY IS KEY

- USER PERCEIVED QUALITY CAN BE QUANTIFIED
  - SATISFACTION LEVELS
  - SYSTEM AVAILABILITY
  - SYSTEM FAILURE RATES
  - USER RESPONSE / REPAIR EXPECTATION.
- VENDOR QUALITY IMAGE

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## VENDOR QUALITY IMAGE

- "REFLEX" RESPONSE
- PERFORMANCE
- THRESHOLDS
- PROFILE DIFFERENCE



## "REFLEX" RESPONSE

VENDOR	WEIGHTED RESPONSE $\Delta SI$			REFLEX RESPONSE $\Delta SI$		
	2.0	1.0	0	1.0	2.0	
A			0.2		0.5	
B			0.5		1.3	
C			0.7		1.0	
D			0.7		1.8	

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## POOR QUALITY IMAGE

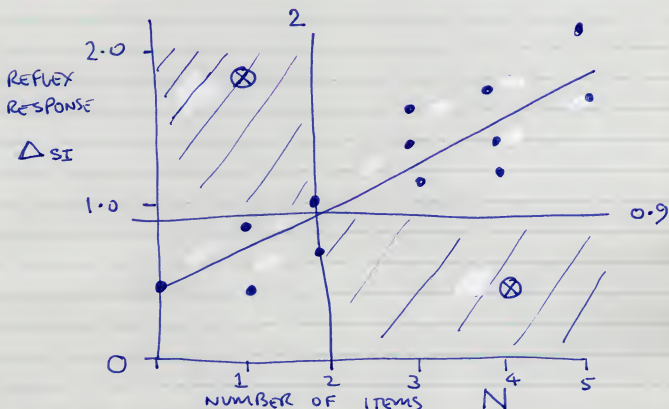
FAILURE IN MORE THAN 2  
CRITERIA:-

- CONCERN WITH MORE THAN 2 ASPECTS OF SERVICE
- CONCERN WITH SYSTEMS AVAILABILITY
- 3 OR MORE SYSTEM FAILURES PER YEAR
- RESPONSE TIME FALLS SHORT OF USER EXPECTATION
- REPAIR/FIX TIME FALLS SHORT OF USER EXPECTATION.





# QUALITY IMAGE PROFILE



## NOTE FOR GRAPHICS :

THIS DIAGRAM IS ILLUSTRATIVE  
NOT ABSOLUTE. JUST MAKE SLIDE-  
LOOK LIKE DIAGRAM, PRECISION  
OF PLOTTED POINTS IS NOT IMPORTANT.

EXCEPT POINTS SHOULD ALIGN WITH  
WHOLE NUMBERS ON HORIZONTAL  
SCALE

03/17/2014

1. The first part of the paper discusses the importance of the study of the history of the United States. It is argued that the study of history is essential for understanding the present and for shaping the future. The author states that history is not just a collection of facts, but a way of thinking about the world. It is a way of understanding the human condition and the role of individuals in society. The author also argues that the study of history is important for the development of a sense of national identity and for the promotion of democratic values. The author concludes that the study of history is a vital part of a well-rounded education and that it is essential for the development of a responsible citizenry.

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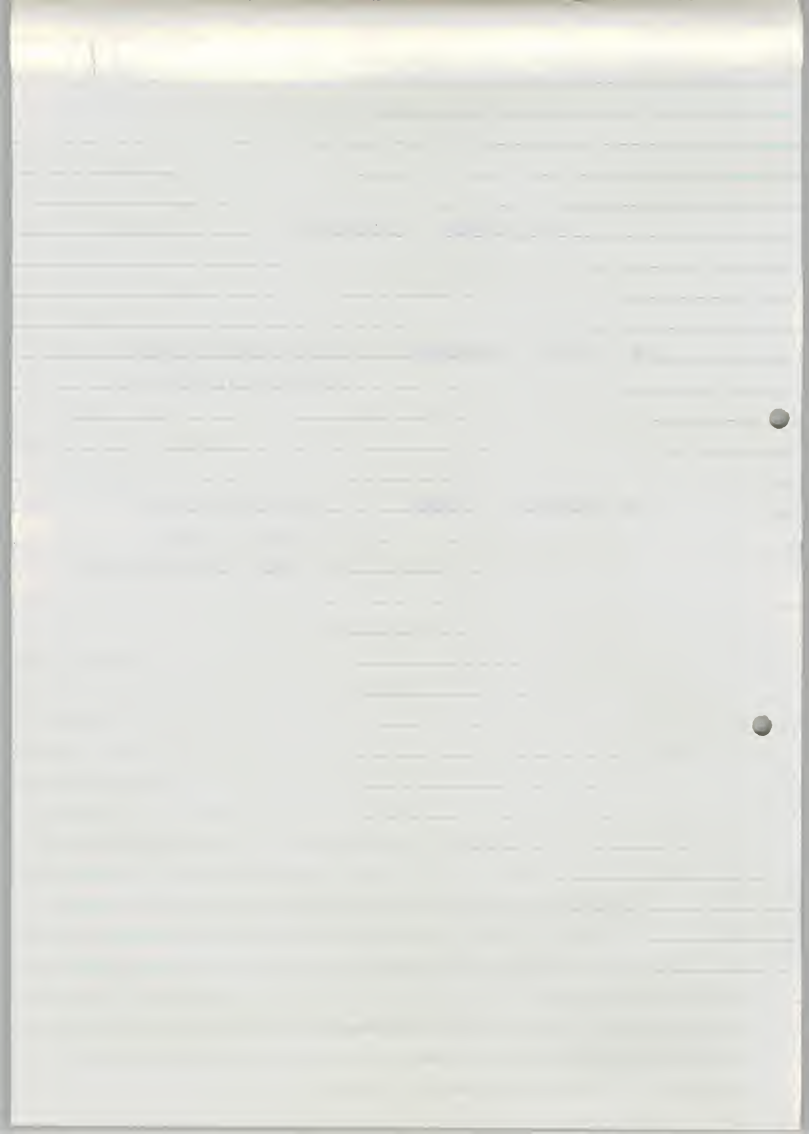
## HARDWARE SERVICE

- USER CONCERNS
  - ENGINEER SKILLS
  - SPARES AVAILABILITY
- VENDOR ISSUES
  - RESTORE TIME
  - QUALITY/PRICE
  - FLEXIBILITY
  - OPERATIONAL IMPACT

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## SOFTWARE SUPPORT

- USER CONCERNS
  - ENGINEER SKILLS
  - DOCUMENTATION
  
- VENDOR ISSUES
  - SOFTWARE QUALITY
  - SKILL LEVELS
  - USER SATISFACTION



## QUALITY PRICE CONFLICT

## USERS

- QUALITY MORE IMPORTANT THAN PRICE
- 70% CONSIDER SERVICE HAS GOOD PRICE/PERFORMANCE



## VENDORS

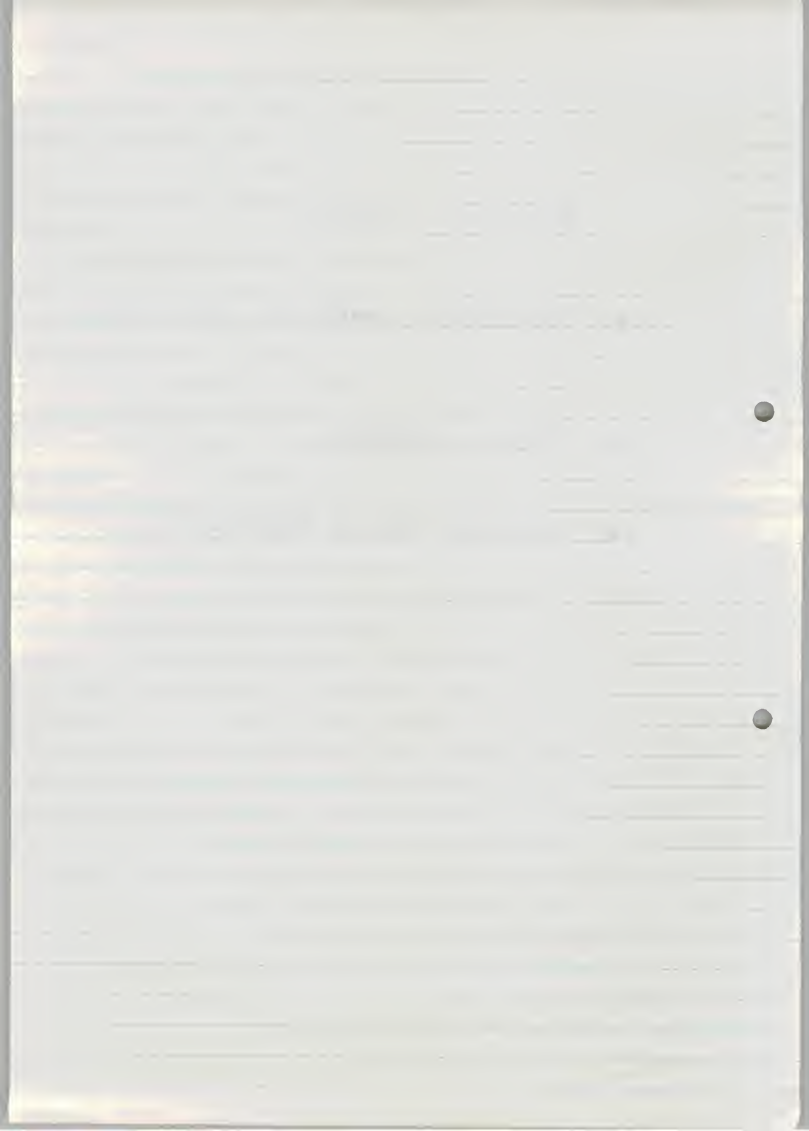
- 40% CONSIDER PRICE RESTRICTS SERVICE QUALITY
- 15% CONCERNED THAT PRICING PRESSURE MAY IMPACT QUALITY





## PRICING ISSUES

- STAGNATION , HARDWARE SERVICE MARKET
- PRICE INCREASES
- SELECTIVE PRICING / PROFITABILITY



## PRICE STIMULATION

HISTORICAL VENDOR PRICING ACTIVITIES



INFLUENCE



FUTURE USER PRICE EXPECTATIONS

THE UNIVERSITY OF CHICAGO

DEPARTMENT OF THE HISTORY OF ARTS

THE HISTORY OF ARTS IN THE UNITED STATES

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THE HISTORY OF ARTS IN THE UNITED STATES

## CONFIDENCE IN COMPUTER VENDORS

- 65% + of users show preference for ONE-VENDOR SERVICE
- 85% - 89% show prefer the "ONE-VENDOR" to be main hardware supplier

The first of these is the fact that the system is not a simple one. It is a complex system, and the behavior of the system is not predictable. The second is that the system is not a simple one. It is a complex system, and the behavior of the system is not predictable. The third is that the system is not a simple one. It is a complex system, and the behavior of the system is not predictable. The fourth is that the system is not a simple one. It is a complex system, and the behavior of the system is not predictable. The fifth is that the system is not a simple one. It is a complex system, and the behavior of the system is not predictable. The sixth is that the system is not a simple one. It is a complex system, and the behavior of the system is not predictable. The seventh is that the system is not a simple one. It is a complex system, and the behavior of the system is not predictable. The eighth is that the system is not a simple one. It is a complex system, and the behavior of the system is not predictable. The ninth is that the system is not a simple one. It is a complex system, and the behavior of the system is not predictable. The tenth is that the system is not a simple one. It is a complex system, and the behavior of the system is not predictable.

## CHALLENGES

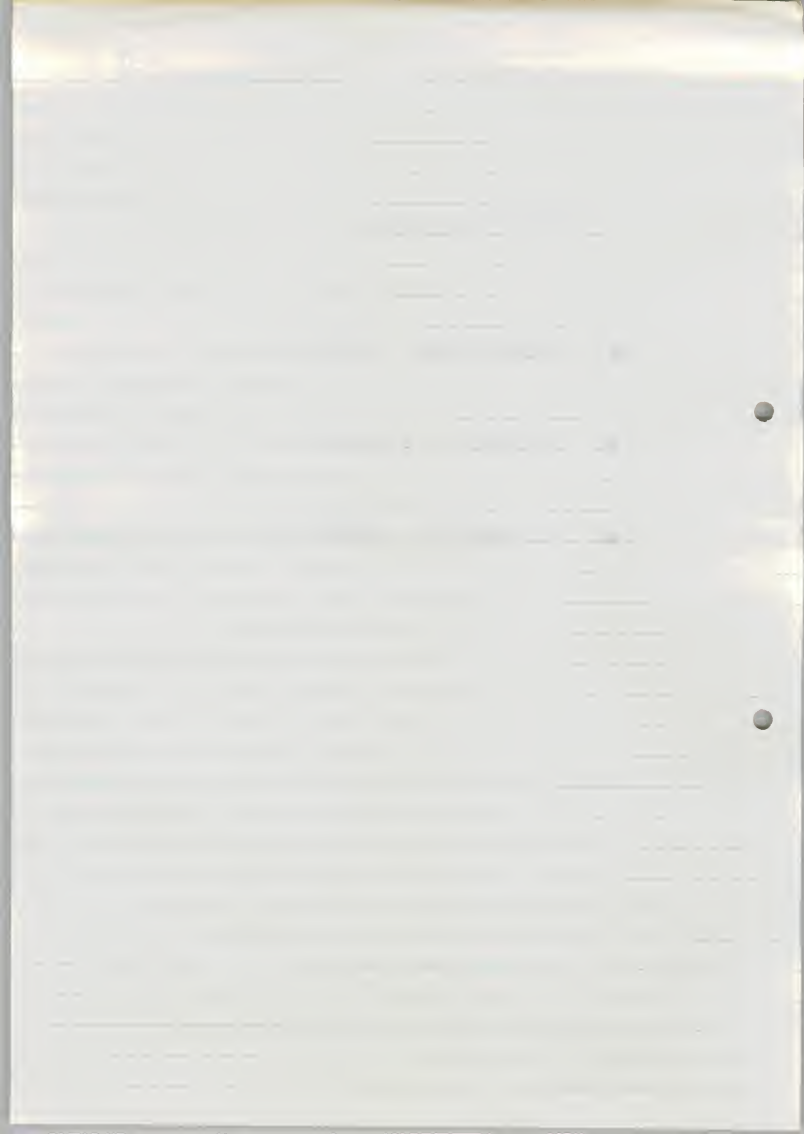
- REVERSAL OF SELECTIVE PRICING TRENDS
- DOMINANCE OF HARDWARE SERVICE AS A REVENUE STREAM
- VENDOR QUALITY IMAGE

1000 (1000) 1000 (1000)



## OPPORTUNITIES

- HARDWARE SERVICE
- LARGE SYSTEMS
- QUALITY SERVICE



## PRICING OPPORTUNITIES

FUTURE PRICE INCREASE EXPECTATION	PERCENT		
	LARGE SYSTEMS	MEDIUM SYSTEMS	SMALL SYSTEMS
HARDWARE SERVICE	4.4	3.5	3.1
SOFTWARE SUPPORT	5.0	3.7	3.4

NOTES (1) USER EXPECTATION  
(2) COLLECTED FOR SELECTIVE PRICING

SAMPLE SIZE : 1345



## QUALITY IS KEY

- QUALITY IS MORE IMPORTANT THAN PRICE
- QUALITY IS A KEY COMPETITIVE STRATEGY

PH